Appendix E

Allocation Methodology

Methodology for allocation of revenues from the sale of recyclable materials delivered to the SMaRT Station®

January 10, 2002

Background

The June 9, 1992 Memorandum of Understanding (MOU) among the three participating agencies (Mountain View, Palo Alto and Sunnyvale) contains methodologies for allocating SMaRT Station expenses, revenues, debt service and waste disposal costs. The cities make quarterly payments to the SMaRT Station Fund based on a budget estimate. At the close of each fiscal year, actual revenues and expenses are reconciled and re-distributed in accordance with the MOU's allocation principles. The MOU calls for the cities to develop detailed procedures to implement the revenue allocation principles in the MOU. The cities of Sunnyvale and Mountain View began delivering source separated recyclable materials to the SMaRT Station on July 2, 2001.

Purpose

In accordance with the Memorandum of Understanding this document describes the methodology for the allocation of revenues from the sale of source separated recyclable materials at the SMaRT Station to the three Participating Agencies. The methodology applies to materials received beginning July 2001 and will be applied to the annual reconciliation performed for the year ending June 30, 2002. It will continue in force until modified or replaced.

Overview of Revenue Sources

Revenues are generated from the sale of recyclable materials. Revenues may include scrap value and applicable California Redemption Value (CRV). The State of California sets rates for CRV according to the program from which the material is generated. These rates vary for material from source separated collection programs, MRF collection programs and buyback programs. In accordance with the operating agreement, GreenTeam/Zanker markets recyclable materials and shares the revenue, or "negative revenue" (cost to recycle) with the cities. The share of revenue retained by the contractor increases as the achieved MSW diversion rate increases.

Revenue- Generating Recyclable Material Streams

MRF recovered materials are recyclable materials recovered by GreenTeam/Zanker from the municipal solid waste (MSW) delivered by the Participating Agencies. A tipping fee, currently $22.58 per ton, is paid to GreenTeam/Zanker for incoming MSW to the SMaRT Station. Revenues from the sale of MRF recovered materials are allocated on the basis of each city's percentage of incoming MSW to SMaRT (Operations Share).

Buyback materials are delivered directly to the SMaRT Station by customers who are reimbursed California Redemption Value (CRV). This material is separated by customers at the buyback center. There is no tipping fee paid for this incoming material. In accordance with State of California regulations, buyback transactions are tracked through the use of receipts and logs. Revenues from the sale of buyback materials are allocated on the basis of each city's percentage of incoming MSW to SMaRT (Operations Share).

Drop-off materials are delivered directly to the SMaRT Station for recycling by members of the general public. These materials may or may not have a CRV or scrap value, but are collected as a public service, and to provide additional diversion from the landfill. There is no tipping fee paid for this incoming material. Revenues from the sale of drop-off materials are allocated on the basis of each city's percentage of incoming MSW to SMaRT (Operations Share).

Source separated yard trimmings are yard waste materials separated by residents and collected by the Sunnyvale and Mountain View franchised haulers. A tipping fee, currently $22.58 per ton, is paid to GreenTeam/Zanker for this incoming material. Costs to recycle source separated yard trimmings materials are allocated on the basis of each city's share of incoming yard trimmings (Yard Waste Share).

Source-Separated recyclables are recyclable materials collected by the Mountain View and Sunnyvale franchised haulers. These include recyclables collected from residential (single and multi-family) and commercial source separated collection programs. There is no tipping fee paid for this incoming material. Since collection programs are not the same between cities and among each city's programs, material is received in

various degrees of separation. This material is further separated into sub-streams (such as aluminum cans, glass, etc...). Revenues from the sale of source separated recyclable materials are allocated on the basis of the quantity, type and grade, including degree of separation, of the incoming material stream (Source Separated Share). The quantity, type and grade of these materials are determined by periodic characterization studies performed on the incoming materials stream and by receiving records maintained by the contractor.

Processing of Materials for Sale to Markets

After each of these incoming streams (MRF, Drop-off, Buy-back and Source Separated Recyclables) is separated, like materials are combined for sale to end markets. This includes baling and/or combining together in containers for shipping. GreenTeam/Zanker markets the recyclable materials and collects the revenues from the buyers. GreenTeam/Zanker reimburses the cities' share as a credit on its monthly invoice, after the end of the month in which the material is sold.

Waste Characterization

The quantity, type and grade of the source separated materials is determined by periodic characterization studies performed on the incoming materials stream and by receiving records maintained by the contractor. The characterization study will be repeated every 6-9 months or after significant program or market changes indicate the need for a new study.

One load will be selected randomly for each city, representing each collection day. Each of these loads will be sorted separately using the curbside processing equipment. After sorting, each commodity will be weighed (including residue) and the results will be recorded and balanced to the total incoming material. A percentage for each commodity will be determined by dividing the total amount of each individual commodity by the total amount of the loads received.

Application of Revenue Sharing

Source-Separated Recyclables Recording: Net vehicle weights are measured at the main inbound scale at the SMaRT Station and a scale ticket is generated. All Source-separated recyclables are identified as "Curbside" at the main scale, and are tallied separately for tracking purposes.

Residential Source Separated Recyclables Collections

After the weight is recorded at the inbound scale, the driver off-loads used motor oil and the attendant records the gallons by truck. The drivers then proceeds to the curbside processing area where an attendant records the gross weight using the curbside scale. The attendant logs the vehicle weight after each material is unloaded to provide weights for each stream of material delivered (i.e. commingled containers, mixed paper, newspaper) for each vehicle trip.

Commercial Source Separated Recyclable Collections

The weights are recorded at the inbound scale. The driver then proceeds to the curbside processing area where an attendant records the gross weight using the curbside scale. The attendant logs the vehicle weight after each material is unloaded to provide weights for each stream of material delivered (i.e. commingled containers, mixed paper, newspaper) for each vehicle trip. Mountain View's single stream material may be tipped on the MSW tipping floor and sorted through the MRF.

The logs generated from the from the source separated recyclables delivered to the SMaRT Station are then transferred to a spreadsheet that will produce monthly totals by city and by stream of material delivered (Attachment 1 & 2).

Applying Characterization Percentages

The percentages derived from the characterization will be applied to incoming materials to determine revenue share (Attachment 3 & 4). For example, suppose Sunnyvale's characterization determines that the newspaper stream is comprised of 2% contamination and 98% news and incoming news for Sunnyvale's trucks has been recorded at 100 tons. Sunnyvale will receive revenues for 98 tons of news for the month.

Calculation of Revenue Share for Participating Agencies

Source-Separated recyclables revenue will be calculated on a monthly basis and booked to a separate revenue account. At the end of each fiscal year the revenues will be adjusted in accordance with the annual reconciliation using the attached worksheet (Attachment 5).

Example of calculation of revenue share by city:

The following is an example of allocating a single recyclable (glass) demonstrates the bookkeeping necessary to separate recyclables received from the MSW, Drop-off, Buy Back and source separated recyclable collections.

The following data is used for this example:

- Sunnyvale delivered 50% of the total MSW to SMaRT
- Mountain View delivered 25% of the total MSW to SMaRT
- Palo Alto delivered 25% of the total MSW to SMaRT
- 1,100 tons of glass were sold during the month
- 250 tons of glass were recorded in the source separated programs
- 150 tons of glass were recorded for Sunnyvale's source separated program (60%)
- 100 tons of glass were recorded for Mountain View's source separated program (40%)
- 100 tons of material were purchased at the buyback center

(Note: Assume the Cities receive 50% of the total revenue from the sale of recyclables).

Therefore, 1,100 total tons (-) 250 source separated tons = 850 tons of recyclable materials are from the MRF, drop-off and buyback.

Each material type will be distributed amongst the source separated, buyback, and MRF and drop-off categories. Each allocation will be made on the basis of this hierarchy:

	Tons	**Revenue**	**Average Revenue/Ton**
Total Tons	1100	$11,000	$10
- Total Source separated Tons	250	2,500	
= MRF Recovered, Drop-off and buyback	850	$8,500	

Source separated Revenue Share	Tons	Total	GT/Z Share	City
Sunnyvale	150	$ 1500	$ 750	$ 750
Mountain View	100	1000	500	500
Total	250	$ 2500	$1250	$1250

Buyback, Drop-off, MRF Revenue

Tons	Total	GT/Z Share	City Share
850	$ 8500	$4250	$4250

Buyback, Drop-off, MRF Revenue allocated based on "operations share"

		City Share
Sunnyvale	(50%)	$2125.00
Mountain View	(25%)	1062.50
Palo Alto	(25%)	1062.50
Total		$4250.00

Total Revenue Allocation:

	Sunnyvale	Mountain View	Palo Alto	GT/Z
Buyback, Drop-off, MRF	$2125.00	$1062.50	1062.50	4250.00
Source separated	750.00	500.00	0.00	1250.00
Total **$11,000**	**2875.00**	**1562.50**	**1062.50**	**5500.00**

Appendix F

Support Calculations/Tables

Sunnyvale Sampling Summary

GENERAL LOAD INFORMATION

	1	2	3	4	5	6
Hauler:	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY
Date:	3/22/03	3/22/03	3/25/03	3/25/03	3/26/03	3/26/03
Truck #:	712	703	713	715	714	703
Route #:	702	706	703	705	704	615
SMaRT #:	385	390	386	383	387	390
Load Type:	SF Residential	MF Residential	SF Residential	SF Residential	SF Residential	Schools/City

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Tin Cans	264	172	282	436	344	56
PET	226	132	326	316	282	20
HDPE - Mix	272	286	334	380	258	22
Aluminum Cans	84	40	80	78	76	14
Glass Bottles - Clear	352	330	432	438	354	12
Glass Bottles - Green	356	308	154	288	368	-
Glass Bottles - Brown	180	142	164	194	174	-
Glass Bottles - Mix	986	602	1,628	1,486	1,350	-
Liquid	10	10	20	14	24	6
Residue	342	582	422	378	342	18
Shrinkage	28	36	(2)	92	28	32
Total Container Compartment	3,100	2,640	3,840	4,100	3,600	180

Fiber	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	5,106	7,162	5,056	4,552	6,094	-
Mixed Paper	504	502	450	466	372	5,836
Old Corrugated Cardboard	462	60	916	708	346	-
Residue	21	84	42	29	10	-
Tin Cans	2	7	4	26	1	-
PET	4	10	4	24	1	-
HDPE - Mix	2	28	12	22	2	-
Aluminum Cans	2	7	2	8	1	-
Glass Bottles - Clear	10	-	-	-	2	-
Glass Bottles - Green	-	-	-	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-
Glass Bottles - Mix	-	34	6	62	-	-
Liquid	-	4	-	-	-	-
Shrinkage	27	22	(72)	(17)	292	(16)
Total Fiber Compartment	6,140	7,920	6,420	5,880	7,120	5,820

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Tin Cans	8.5%	6.5%	7.3%	10.6%	9.6%	31.1%
PET	7.3%	5.0%	8.5%	7.7%	7.8%	11.1%
HDPE - Mix	8.8%	10.8%	8.7%	9.3%	7.2%	12.2%
Aluminum Cans	2.7%	1.5%	2.1%	1.9%	2.1%	7.8%
Glass Bottles - Clear	11.4%	12.5%	11.3%	10.7%	9.8%	6.7%
Glass Bottles - Green	11.5%	11.7%	4.0%	7.0%	10.2%	0.0%
Glass Bottles - Brown	5.8%	5.4%	4.3%	4.7%	4.8%	0.0%
Glass Bottles - Mix	31.8%	22.8%	42.4%	36.2%	37.5%	0.0%
Liquid	0.3%	0.4%	0.5%	0.3%	0.7%	3.3%
Residue	11.0%	22.0%	11.0%	9.2%	9.5%	10.0%
Shrinkage	0.9%	1.4%	-0.1%	2.2%	0.8%	17.8%
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fiber	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	83.2%	90.4%	78.8%	77.4%	85.6%	0.0%
Mixed Paper	8.2%	6.3%	7.0%	7.9%	5.2%	100.3%
Old Corrugated Cardboard	7.5%	0.8%	14.3%	12.0%	4.9%	0.0%
Residue	0.3%	1.1%	0.7%	0.5%	0.1%	0.0%
Tin Cans	0.0%	0.1%	0.1%	0.4%	0.0%	0.0%
PET	0.1%	0.1%	0.1%	0.4%	0.0%	0.0%
HDPE - Mix	0.0%	0.4%	0.2%	0.4%	0.0%	0.0%
Aluminum Cans	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
Glass Bottles - Clear	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.0%	0.4%	0.1%	1.1%	0.0%	0.0%
Liquid	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Shrinkage	0.4%	0.3%	-1.1%	-0.3%	4.1%	-0.3%
Total Fiber Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sunnyvale Sampling Summary

GENERAL LOAD INFORMATION

	7	8	9	10	11	12
Hauler:	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY
Date:	3/27/03	3/27/03	3/28/03	3/28/03	3/29/03	3/29/03
Truck #:	711	701	712	714	711	715
Route #:	701	706	702	704	701	705
SMaRT #:	384	388	385	387	384	383
Load Type:	SF Residential	MF Residential	SF Residential	SF Residential	SF Residential	SF Residential

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Tin Cans	320	194	282	368	312	352
PET	284	164	244	272	254	204
HDPE - Mix	274	332	258	284	250	276
Aluminum Cans	98	30	100	110	92	84
Glass Bottles - Clear	346	312	414	376	338	396
Glass Bottles - Green	450	306	522	438	400	370
Glass Bottles - Brown	146	168	140	146	160	128
Glass Bottles - Mix	1,868	982	1,316	1,458	1,224	1,136
Liquid	12	20	16	-	8	10
Residue	418	496	290	342	298	288
Shrinkage	(76)	136	(62)	46	(16)	(4)
Total Container Compartment	4,140	3,140	3,520	3,840	3,320	3,240

Fiber	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	7,158	8,290	6,532	7,692	6,132	6,078
Mixed Paper	350	591	286	300	364	304
Old Corrugated Cardboard	494	154	510	644	484	414
Residue	22	2	16	8	15	34
Tin Cans	4	7	1	-	2	8
PET	4	12	1	8	2	8
HDPE - Mix	4	27	-	-	1	4
Aluminum Cans	2	5	1	1	1	4
Glass Bottles - Clear	10	-	-	-	-	-
Glass Bottles - Green	-	-	1	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-
Glass Bottles - Mix	-	36	-	4	6	24
Liquid	-	-	-	-	-	4
Shrinkage	32	98	(6)	44	(6)	78
Total Fiber Compartment	8,080	9,220	7,340	8,700	7,000	6,960

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Tin Cans	7.7%	6.2%	8.0%	9.6%	9.4%	10.9%
PET	6.9%	5.2%	6.9%	7.1%	7.7%	6.3%
HDPE - Mix	6.6%	10.6%	7.3%	7.4%	7.5%	8.5%
Aluminum Cans	2.4%	1.0%	2.8%	2.9%	2.8%	2.6%
Glass Bottles - Clear	8.4%	9.9%	11.8%	9.8%	10.2%	12.2%
Glass Bottles - Green	10.9%	9.7%	14.8%	11.4%	12.0%	11.4%
Glass Bottles - Brown	3.5%	5.4%	4.0%	3.8%	4.8%	4.0%
Glass Bottles - Mix	45.1%	31.3%	37.4%	38.0%	36.9%	35.1%
Liquid	0.3%	0.6%	0.5%	0.0%	0.2%	0.3%
Residue	10.1%	15.8%	8.2%	8.9%	9.0%	8.9%
Shrinkage	-1.8%	4.3%	-1.8%	1.2%	-0.5%	-0.1%
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fiber	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	88.6%	89.9%	89.0%	88.4%	87.6%	87.3%
Mixed Paper	4.3%	6.4%	3.9%	3.4%	5.2%	4.4%
Old Corrugated Cardboard	6.1%	1.7%	6.9%	7.4%	6.9%	5.9%
Residue	0.3%	0.0%	0.2%	0.1%	0.2%	0.5%
Tin Cans	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%
PET	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%
HDPE - Mix	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%
Aluminum Cans	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Glass Bottles - Clear	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.0%	0.4%	0.0%	0.0%	0.1%	0.3%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Shrinkage	0.4%	1.1%	-0.1%	0.5%	-0.1%	1.1%
Total Fiber Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sunnyvale Sampling Summary

GENERAL LOAD INFORMATION

	13	14	15	16	17	18
Hauler:	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY	SPECIALTY
Date:	4/1/03	4/1/03	4/2/03	4/2/03	4/3/03	4/3/03
Truck #:	714	702	715	711	712	713
Route #:	704	707	705	701	702	703
SMaRT #:	387	389	383	384	385	386
Load Type:	SF Residential	MF Residential	SF Residential	SF Residential	SF Residential	SF Residential

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Tin Cans	170	202	300	272	284	270
PET	126	162	288	272	226	236
HDPE - Mix	88	400	262	292	196	222
Aluminum Cans	44	88	90	106	108	82
Glass Bottles - Clear	230	400	350	354	298	342
Glass Bottles - Green	122	296	286	394	316	448
Glass Bottles - Brown	86	226	184	184	112	150
Glass Bottles - Mix	780	1,270	1,394	1,674	1,552	1,450
Liquid	16	8	12	16	10	14
Residue	130	718	341	370	328	348
Shrinkage	(72)	230	54	146	22	58
Total Container Compartment	1,720	4,000	3,560	4,080	3,452	3,620

Fiber	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	6,622	8,652	6,062	5,124	6,986	6,208
Mixed Paper	686	678	392	374	360	322
Old Corrugated Cardboard	774	168	550	460	516	268
Residue	20	106	38	24	28	10
Tin Cans	-	12	12	2	2	2
PET	4	8	10	4	4	4
HDPE - Mix	1	30	6	6	4	2
Aluminum Cans	2	4	8	1	2	1
Glass Bottles - Clear	-	-	-	-	-	-
Glass Bottles - Green	-	-	-	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-
Glass Bottles - Mix	1	58	30	8	4	6
Liquid	-	-	-	-	-	-
Shrinkage	11	104	(8)	(3)	(6)	18
Total Fiber Compartment	8,120	9,820	7,100	6,000	7,900	6,840

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Tin Cans	9.9%	5.1%	8.4%	6.7%	8.2%	7.5%
PET	7.3%	4.1%	8.1%	6.7%	6.5%	6.5%
HDPE - Mix	5.1%	10.0%	7.4%	7.2%	5.7%	6.1%
Aluminum Cans	2.6%	2.2%	2.5%	2.6%	3.1%	2.3%
Glass Bottles - Clear	13.4%	10.0%	9.8%	8.7%	8.6%	9.4%
Glass Bottles - Green	7.1%	7.4%	8.0%	9.7%	9.2%	12.4%
Glass Bottles - Brown	5.0%	5.7%	5.2%	4.5%	3.2%	4.1%
Glass Bottles - Mix	45.3%	31.8%	39.2%	41.0%	45.0%	40.1%
Liquid	0.9%	0.2%	0.3%	0.4%	0.3%	0.4%
Residue	7.6%	18.0%	9.6%	9.1%	9.5%	9.6%
Shrinkage	-4.2%	5.8%	1.5%	3.6%	0.6%	1.6%
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fiber	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	81.6%	88.1%	85.4%	85.4%	88.4%	90.8%
Mixed Paper	8.4%	6.9%	5.5%	6.2%	4.6%	4.7%
Old Corrugated Cardboard	9.5%	1.7%	7.7%	7.7%	6.5%	3.9%
Residue	0.2%	1.1%	0.5%	0.4%	0.4%	0.1%
Tin Cans	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%
PET	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
HDPE - Mix	0.0%	0.3%	0.1%	0.1%	0.1%	0.0%
Aluminum Cans	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Glass Bottles - Clear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.0%	0.6%	0.4%	0.1%	0.1%	0.1%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Shrinkage	0.1%	1.1%	-0.1%	-0.1%	-0.1%	0.3%
Total Fiber Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sunnyvale Sampling Summary

GENERAL LOAD INFORMATION

	19	20
Hauler:	SPECIALTY	SPECIALTY
Date:	4/4/03	4/4/03
Truck #:	711	703
Route #:	701	706
SMaRT #:	384	390
Load Type:	SF Residential	MF Residential

Summaries By Route Type

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	SF Route Totals Ave(lbs)	MF Route Totals Ave(lbs)	Residential Route Totals Ave(lbs)	Schools/ City Hall Route Totals Ave(lbs)
Tin Cans	338	242	306	203	284	56
PET	286	200	256	165	237	20
HDPE - Mix	316	252	264	318	275	22
Aluminum Cans	100	32	89	48	80	14
Glass Bottles - Clear	356	370	358	353	357	12
Glass Bottles - Green	400	318	354	307	344	-
Glass Bottles - Brown	136	160	152	174	157	-
Glass Bottles - Mix	1,628	872	1,395	932	1,298	-
Liquid	8	8	13	12	12	6
Residue	434	464	338	565	386	18
Shrinkage	(2)	82	16	121	38	32
Total Container Compartment	4,000	3,000	3,542	3,195	3,469	180

Fiber	Total (lbs)	Total (lbs)	Ave(lbs)	Ave(lbs)	Ave(lbs)	Ave(lbs)
Old Newspaper	8,738	6,508	6,276	7653	6,566	-
Mixed Paper	438	922	398	673	456	5,836
Old Corrugated Cardboard	522	136	538	130	452	-
Residue	10	76	22	67	31	-
Tin Cans	2	60	4	21	8	-
PET	2	24	6	14	7	-
HDPE - Mix	4	48	5	33	11	-
Aluminum Cans	-	-	2	4	3	-
Glass Bottles - Clear	-	-	1	0	1	-
Glass Bottles - Green	-	-	0	0	0	-
Glass Bottles - Brown	-	-	-	0	-	-
Glass Bottles - Mix	6	102	10	58	20	-
Liquid	-	-	0	1	0	-
Shrinkage	39	45	28	67	36	(16)
Total Fiber Compartment	9,760	7,920	7,291	8,720	7,592	5,820

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Ave(%)	Ave(%)	Ave(%)	Ave(%)
Tin Cans	8.5%	8.1%	8.6%	6.3%	8.2%	31.1%
PET	7.2%	6.7%	7.2%	5.1%	6.8%	11.1%
HDPE - Mix	7.9%	8.4%	7.5%	9.9%	7.9%	12.2%
Aluminum Cans	2.5%	1.1%	2.5%	1.5%	2.3%	7.8%
Glass Bottles - Clear	8.9%	12.3%	10.1%	11.0%	10.3%	6.7%
Glass Bottles - Green	10.0%	10.6%	10.0%	9.6%	9.9%	0.0%
Glass Bottles - Brown	3.4%	5.3%	4.3%	5.4%	4.5%	0.0%
Glass Bottles - Mix	40.7%	29.1%	39.4%	29.2%	37.4%	0.0%
Liquid	0.2%	0.3%	0.4%	0.4%	0.4%	3.3%
Residue	10.9%	15.5%	9.5%	17.7%	11.1%	10.0%
Shrinkage	-0.1%	2.7%	0.5%	3.8%	1.1%	17.8%
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fiber	Total (%)	Total (%)	Ave(%)	Ave(%)	Ave(%)	Ave(%)
Old Newspaper	89.5%	82.2%	86.1%	87.8%	86.5%	0.0%
Mixed Paper	4.5%	11.6%	5.5%	7.7%	6.0%	100.3%
Old Corrugated Cardboard	5.3%	1.7%	7.4%	1.5%	6.0%	0.0%
Residue	0.1%	1.0%	0.3%	0.8%	0.4%	0.0%
Tin Cans	0.0%	0.8%	0.1%	0.2%	0.1%	0.0%
PET	0.0%	0.3%	0.1%	0.2%	0.1%	0.0%
HDPE - Mix	0.0%	0.6%	0.1%	0.4%	0.1%	0.0%
Aluminum Cans	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Clear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.1%	1.3%	0.1%	0.7%	0.3%	0.0%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Shrinkage	0.4%	0.6%	0.4%	0.8%	0.5%	-0.3%
Total Fiber Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mountain View Sampling Summary

GENERAL LOAD INFORMATION

	1	2	3	4	5	6	7	8
Hauler:	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL
Date:	3/22/03	3/25/03	3/26/03	3/26/03	3/27/03	3/28/03	3/28/03	3/29/03
Truck #:	15096	15097	15096	15095	15098	15067	15095	15098
Route #:	15096	15097	15096	15095	15098	15097	15095	15098
SMaRT #:	168	169	168	390	170	175	167	170
Load Type:	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Tin Cans	204	172	298	234	264	76	264	230
PET	154	182	218	266	202	122	278	218
HDPE - Mix	166	148	146	258	212	118	290	256
Aluminum Cans	72	70	68	66	68	32	60	66
Glass Bottles - Clear	310	312	360	362	410	182	422	444
Glass Bottles - Green	434	414	554	590	496	170	526	566
Glass Bottles - Brown	148	128	208	298	178	100	224	206
Glass Bottles - Mix	850	766	1,440	1,950	1,164	500	1,488	1,140
Liquid	11	8	8	10	16	10	16	6
Residue	216	270	416	520	450	236	390	494
Shrinkage	55	70	144	86	(40)	(26)	82	(6)
Total Container Compartment	2,620	2,540	3,860	4,640	3,420	1,520	4,040	3,620

Newspaper/Single Compartment	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	3,602	2,582	4,468	3,416	3,948	1,714	3,030	3,604
Mixed Paper	94	58	76	108	100	-	44	128
Old Corrugated Cardboard	-	-	-	-	-	-	-	-
Tin Cans	-	10	-	0	-	1	-	-
PET	-	2	1	2	1	1	-	-
HDPE - Mix	-	-	1	2	1	1	-	0
Aluminum Cans	-	2	1	0	1	-	-	-
Glass Bottles - Clear	-	-	-	1	2	-	-	-
Glass Bottles - Green	-	-	-	-	-	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-	-	-
Glass Bottles - Mix	-	-	-	-	-	-	-	-
Liquid	-	-	-	-	-	-	-	-
Residue	1	1	10	-	6	24	2	2
Shrinkage	(37)	(95)	(16)	(89)	43	21	(56)	26
Total Newspaper Compartment	3,660	2,560	4,540	3,440	4,100	1,760	3,020	3,760

Mixed Paper	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	-	-	-	-	-	-	-	-
Mixed Paper	5,182	5,210	7,240	7,616	6,122	3,240	7,528	6,814
Old Corrugated Cardboard	-	-	-	-	-	-	-	-
Residue	-	-	-	-	-	-	-	-
Shrinkage	58	50	40	84	118	-	52	86
Total Mixed Paper Compartment	5,240	5,260	7,280	7,700	6,240	3,240	7,580	6,900

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Tin Cans	7.8%	6.8%	7.7%	5.0%	7.7%	5.0%	6.5%	6.4%
PET	5.9%	7.2%	5.6%	5.7%	5.9%	8.0%	6.9%	6.0%
HDPE - Mix	6.3%	5.8%	3.8%	5.6%	6.2%	7.8%	7.2%	7.1%
Aluminum Cans	2.7%	2.8%	1.8%	1.4%	2.0%	2.1%	1.5%	1.8%
Glass Bottles - Clear	11.8%	12.3%	9.3%	7.8%	12.0%	12.0%	10.4%	12.3%
Glass Bottles - Green	16.6%	16.3%	14.4%	12.7%	14.5%	11.2%	13.0%	15.6%
Glass Bottles - Brown	5.6%	5.0%	5.4%	6.4%	5.2%	6.6%	5.5%	5.7%
Glass Bottles - Mix	32.4%	30.2%	37.3%	42.0%	34.0%	32.9%	36.8%	31.5%
Liquid	0.4%	0.3%	0.2%	0.2%	0.5%	0.7%	0.4%	0.2%
Residue	8.2%	10.6%	10.8%	11.2%	13.2%	15.5%	9.7%	13.6%
Shrinkage	2.1%	2.8%	3.7%	1.9%	-1.2%	-1.7%	2.0%	-0.2%
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Newspaper/Single Compartment	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	98.4%	100.9%	98.4%	99.3%	96.3%	97.4%	100.3%	95.9%
Mixed Paper	2.6%	2.3%	1.7%	3.1%	2.4%	0.0%	1.5%	3.4%
Old Corrugated Cardboard	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tin Cans	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PET	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
HDPE - Mix	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Aluminum Cans	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Clear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residue	0.0%	0.0%	0.2%	0.0%	0.1%	1.4%	0.1%	0.1%
Shrinkage	-1.0%	-3.7%	-0.4%	-2.6%	1.0%	1.2%	-1.9%	0.7%
Total Newspaper Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mixed Paper	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mixed Paper	98.9%	99.0%	99.5%	98.9%	98.1%	100.0%	99.3%	98.8%
Old Corrugated Cardboard	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residue	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Shrinkage	1.1%	1.0%	0.5%	1.1%	1.9%	0.0%	0.7%	1.2%
Total Mixed Paper Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mountain View Sampling Summary

GENERAL LOAD INFORMATION

	9	10	11	12	13	14	15	16
Hauler:	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL
Date:	4/1/03	4/2/03	4/3/03	4/4/03	3/25/03	3/27/03	3/29/03	4/2/03
Truck #:	15098	15098	15095	15096	11134	11139	11102	11139
Route #:	15097	15098	15095	15096	11134	11139	11102	11139
MaRT #:	169	170	167	168	161	162	158	162
Load Type:	Residential	Residential	Residential	Residential	Commercial	Commercial	Commercial	Commercial

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Tin Cans	236	214	258	262	n/a	n/a	n/a	n/a
PET	204	172	238	204	n/a	n/a	n/a	n/a
HDPE - Mix	226	178	258	250	n/a	n/a	n/a	n/a
Aluminum Cans	64	62	82	56	n/a	n/a	n/a	n/a
Glass Bottles - Clear	410	296	314	390	n/a	n/a	n/a	n/a
Glass Bottles - Green	384	380	448	402	n/a	n/a	n/a	n/a
Glass Bottles - Brown	260	154	172	172	n/a	n/a	n/a	n/a
Glass Bottles - Mix	1,588	712	1,298	962	n/a	n/a	n/a	n/a
Liquid	10	16	8	10	n/a	n/a	n/a	n/a
Residue	468	300	454	384	n/a	n/a	n/a	n/a
Shrinkage	(50)	(4)	50	108	n/a	n/a	n/a	n/a
Total Container Compartment	3,800	2,480	3,580	3,200	n/a	n/a	n/a	n/a

Newspaper/Single Compartment	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	2,438	3,738	3,054	4,274	-	-	-	-
Mixed Paper	54	92	56	218	2,010	4,902	4,584	6,572
Old Corrugated Cardboard	-	-	-	-	566	807	1,008	514
Tin Cans	-	-	1	-	4	8	102	2
PET	0	-	-	1	30	8	18	10
HDPE - Mix	-	-	-	-	6	10	32	4
Aluminum Cans	0	-	-	-	6	4	2	72
Glass Bottles - Clear	-	-	-	-	-	-	-	-
Glass Bottles - Green	-	-	-	-	-	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-	-	-
Glass Bottles - Mix	4	-	-	1	118	28	234	88
Liquid	-	-	-	-	-	-	-	-
Residue	38	4	2	4	300	-	580	638
Shrinkage	86	66	(53)	(58)	-	(7)	-	-
Total Newspaper Compartment	2,620	3,900	3,060	4,440	3,040	5,760	6,560	7,900

Mixed Paper	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)
Old Newspaper	-	-	-	-	n/a	n/a	n/a	n/a
Mixed Paper	6,272	5,252	7,710	5,656	n/a	n/a	n/a	n/a
Old Corrugated Cardboard	-	-	-	-	n/a	n/a	n/a	n/a
Residue	-	-	-	-	n/a	n/a	n/a	n/a
Shrinkage	(12)	128	110	24	n/a	n/a	n/a	n/a
Total Mixed Paper Compartment	6,260	5,380	7,820	5,680	n/a	n/a	n/a	n/a

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Tin Cans	6.2%	8.6%	7.2%	8.2%	n/a	n/a	n/a	n/a
PET	5.4%	6.9%	6.6%	6.4%	n/a	n/a	n/a	n/a
HDPE - Mix	5.9%	7.2%	7.2%	7.8%	n/a	n/a	n/a	n/a
Aluminum Cans	1.7%	2.5%	2.3%	1.8%	n/a	n/a	n/a	n/a
Glass Bottles - Clear	10.8%	11.9%	8.8%	12.2%	n/a	n/a	n/a	n/a
Glass Bottles - Green	10.1%	15.3%	12.5%	12.6%	n/a	n/a	n/a	n/a
Glass Bottles - Brown	6.8%	6.2%	4.8%	5.4%	n/a	n/a	n/a	n/a
Glass Bottles - Mix	41.8%	28.7%	36.3%	30.1%	n/a	n/a	n/a	n/a
Liquid	0.3%	0.6%	0.2%	0.3%	n/a	n/a	n/a	n/a
Residue	12.3%	12.1%	12.7%	12.0%	n/a	n/a	n/a	n/a
Shrinkage	-1.3%	-0.2%	1.4%	3.4%	n/a	n/a	n/a	n/a
Total Container Compartment	100.0%	100.0%	100.0%	100.0%	n/a	n/a	n/a	n/a

Newspaper/Single Compartment	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	93.1%	95.8%	99.8%	96.3%	0.0%	0.0%	0.0%	0.0%
Mixed Paper	2.1%	2.4%	1.8%	4.9%	66.1%	85.1%	69.9%	83.2%
Old Corrugated Cardboard	0.0%	0.0%	0.0%	0.0%	18.6%	14.0%	15.4%	6.5%
Tin Cans	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	1.6%	0.0%
PET	0.0%	0.0%	0.0%	0.0%	1.0%	0.1%	0.3%	0.1%
HDPE - Mix	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.5%	0.1%
Aluminum Cans	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.0%	0.9%
Glass Bottles - Clear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	0.2%	0.0%	0.0%	0.0%	3.9%	0.5%	3.6%	1.1%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residue	1.5%	0.1%	0.1%	0.1%	9.9%	0.0%	8.8%	8.1%
Shrinkage	3.3%	1.7%	-1.7%	-1.3%	0.0%	-0.1%	0.0%	0.0%
Total Newspaper Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mixed Paper	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)	Total (%)
Old Newspaper	0.0%	0.0%	0.0%	0.0%	n/a	n/a	n/a	n/a
Mixed Paper	100.2%	97.6%	98.6%	99.6%	n/a	n/a	n/a	n/a
Old Corrugated Cardboard	0.0%	0.0%	0.0%	0.0%	n/a	n/a	n/a	n/a
Residue	0.0%	0.0%	0.0%	0.0%	n/a	n/a	n/a	n/a
Shrinkage	-0.2%	2.4%	1.4%	0.4%	n/a	n/a	n/a	n/a
Total Mixed Paper Compartment	100.0%	100.0%	100.0%	100.0%	n/a	n/a	n/a	n/a

Mountain View Sampling Summary

GENERAL LOAD INFORMATION

	17	18	19	20
Hauler:	FOOTHILL	FOOTHILL	FOOTHILL	FOOTHILL
Date:	4/3/03	4/4/03	3/22/03	4/1/03
Truck #:	11155	11102	18	11004
Route #:	11155	11102	18	18
SMaRT #:	172	158	118	118
Load Type:	Commercial	Commercial	OCC	OCC

Summaries By Route Type

CHARACTERIZATION BY WEIGHT

Commingled Containers	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Residential Route Totals Ave (lbs)	Commercial Route Totals Ave (lbs)	OCC Route Totals Ave (lbs)
Tin Cans	n/a	n/a	n/a	n/a	226	n/a	n/a
PET	n/a	n/a	n/a	n/a	205	n/a	n/a
HDPE - Mix	n/a	n/a	n/a	n/a	209	n/a	n/a
Aluminum Cans	n/a	n/a	n/a	n/a	64	n/a	n/a
Glass Bottles - Clear	n/a	n/a	n/a	n/a	351	n/a	n/a
Glass Bottles - Green	n/a	n/a	n/a	n/a	447	n/a	n/a
Glass Bottles - Brown	n/a	n/a	n/a	n/a	187	n/a	n/a
Glass Bottles - Mix	n/a	n/a	n/a	n/a	1,155	n/a	n/a
Liquid	n/a	n/a	n/a	n/a	11	n/a	n/a
Residue	n/a	n/a	n/a	n/a	383	n/a	n/a
Shrinkage	n/a	n/a	n/a	n/a	39	n/a	n/a
Total Container Compartment	n/a	n/a	n/a	n/a	3,277	n/a	n/a

Newspaper/Single Compartment	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Ave (lbs)	Ave (lbs)	Ave (lbs)
Old Newspaper	-	-	-	-	3,322	-	-
Mixed Paper	1,160	1,442	-	-	86	3,445	-
Old Corrugated Cardboard	1,494	1,790	9,628	6,432	-	1,030	8,030
Tin Cans	2	126	-	-	1	41	-
PET	6	30	-	-	1	17	-
HDPE - Mix	4	44	-	-	0	17	-
Aluminum Cans	4	12	-	-	0	17	-
Glass Bottles - Clear	-	-	-	-	0	-	-
Glass Bottles - Green	-	-	-	-	-	-	-
Glass Bottles - Brown	-	-	-	-	-	-	-
Glass Bottles - Mix	76	116	-	-	0	110	-
Liquid	-	-	-	-	-	-	-
Residue	194	560	174	368	8	379	271
Shrinkage	-	-	(42)	-	(14)	(1)	(21)
Total Newspaper Compartment	2,940	4,120	9,760	6,800	3,405	5,053	8,280

Mixed Paper	Total (lbs)	Total (lbs)	Total (lbs)	Total (lbs)	Ave (lbs)	Ave (lbs)	Ave (lbs)
Old Newspaper	n/a	n/a	n/a	n/a	-	n/a	n/a
Mixed Paper	n/a	n/a	n/a	n/a	6,154	n/a	n/a
Old Corrugated Cardboard	n/a	n/a	n/a	n/a	-	n/a	n/a
Residue	n/a	n/a	n/a	n/a	-	n/a	n/a
Shrinkage	n/a	n/a	n/a	n/a	62	n/a	n/a
Total Mixed Paper Compartment	n/a	n/a	n/a	n/a	6,215	n/a	n/a

CHARACTERIZATION BY PERCENTAGE

Commingled Containers	Total (%)	Total (%)	Total (%)	Total (%)	Ave (%)	Ave (%)	Ave (%)
Tin Cans	n/a	n/a	n/a	n/a	6.9%	n/a	n/a
PET	n/a	n/a	n/a	n/a	6.3%	n/a	n/a
HDPE - Mix	n/a	n/a	n/a	n/a	6.4%	n/a	n/a
Aluminum Cans	n/a	n/a	n/a	n/a	1.9%	n/a	n/a
Glass Bottles - Clear	n/a	n/a	n/a	n/a	10.7%	n/a	n/a
Glass Bottles - Green	n/a	n/a	n/a	n/a	13.6%	n/a	n/a
Glass Bottles - Brown	n/a	n/a	n/a	n/a	5.7%	n/a	n/a
Glass Bottles - Mix	n/a	n/a	n/a	n/a	35.2%	n/a	n/a
Liquid	n/a	n/a	n/a	n/a	0.3%	n/a	n/a
Residue	n/a	n/a	n/a	n/a	11.7%	n/a	n/a
Shrinkage	n/a	n/a	n/a	n/a	1.2%	n/a	n/a
Total Container Compartment	n/a	n/a	n/a	n/a	100.0%	n/a	n/a

Newspaper/Single Compartment	Total (%)	Total (%)	Total (%)	Total (%)	Ave (%)	Ave (%)	Ave (%)
Old Newspaper	0.0%	0.0%	0.0%	0.0%	97.6%	0.0%	0.0%
Mixed Paper	39.5%	35.0%	0.0%	0.0%	2.5%	68.2%	0.0%
Old Corrugated Cardboard	50.8%	43.4%	98.6%	94.6%	0.0%	20.4%	97.0%
Tin Cans	0.1%	3.1%	0.0%	0.0%	0.0%	0.8%	0.0%
PET	0.2%	0.7%	0.0%	0.0%	0.0%	0.3%	0.0%
HDPE - Mix	0.1%	1.1%	0.0%	0.0%	0.0%	0.3%	0.0%
Aluminum Cans	0.1%	0.3%	0.0%	0.0%	0.0%	0.3%	0.0%
Glass Bottles - Clear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Green	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Brown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Glass Bottles - Mix	2.6%	2.8%	0.0%	0.0%	0.0%	2.2%	0.0%
Liquid	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Residue	6.6%	13.6%	1.8%	5.4%	0.2%	7.5%	3.3%
Shrinkage	0.0%	0.0%	-0.4%	0.0%	-0.4%	0.0%	-0.3%
Total Newspaper Compartment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mixed Paper	Total (%)	Total (%)	Total (%)	Total (%)	Ave (%)	Ave (%)	Ave (%)
Old Newspaper	n/a	n/a	n/a	n/a	0.0%	n/a	n/a
Mixed Paper	n/a	n/a	n/a	n/a	99.0%	n/a	n/a
Old Corrugated Cardboard	n/a	n/a	n/a	n/a	0.0%	n/a	n/a
Residue	n/a	n/a	n/a	n/a	0.0%	n/a	n/a
Shrinkage	n/a	n/a	n/a	n/a	1.0%	n/a	n/a
Total Mixed Paper Compartment	n/a	n/a	n/a	n/a	100.0%	n/a	n/a

EXHIBIT L

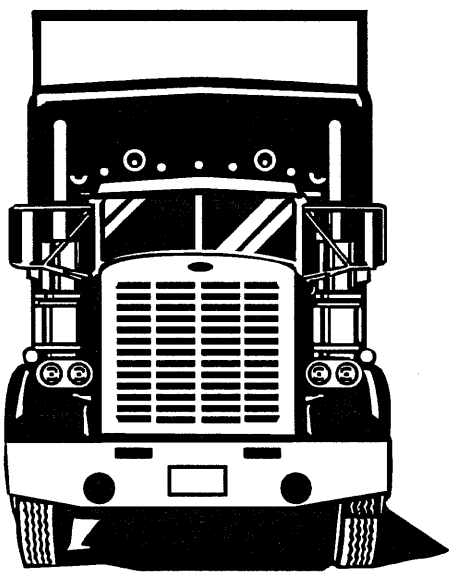
STANDARD OPERATION PROCEDURES

FOR THE DETECTION AND MANAGEMENT

OF RADIOACTIVE MATERIALS

AT THE

SUNNYVALE MATERIALS RECOVERY AND TRANSFER STATION



OVERVIEW

The State of California is considering two bills that would make radiation monitoring a requirement at State authorized landfills. Although this will not directly affect materials recovery facilities, like the Sunnyvale Materials Recovery and Transfer Station (SMaRT Station), it does mean that trash that is transferred from the SMaRT Station to Kirby Canyon or any other landfill will be monitored for radioactivity. Installation of a radiation monitoring system would allow the SMaRT Station to identify whether any incoming loads contained radioactive materials, make appropriate decisions regarding disposition, present records in case of liability claims, and protect workers. Metals from the SMaRT Station also are recovered and sent on to local metal recyclers with gate radiation detectors. A radiation monitoring system would help the SMaRT Station also avoid sending radioactive metals on to these facilities.

Knowing the amount of radiation in incoming loads of waste will give the SMaRT Station operators confidence that the workers are not being exposed to radiation. Workers may be in the proximity of materials contaminated by persons who received nuclear medical treatment. Fortunately, the radioactivity in these materials is short-lived and relatively harmless.[1] It would be only under unusual circumstances that materials from residences would contain harmful levels of radiation.

Although installation of radiation detection equipment may produce intermittent impacts at the SMaRT Station, it will allow managers to protect workers, identify loads containing radioactive materials, and make informed decisions regarding their disposition.

[1] See the following documents for US NRC Release Procedures for Patients that have received nuclear medicine treatment: US Nuclear Regulatory Guide 8.39, "Release of Patients Administered Radioactive Materials," and Appendix U in NRC's NUREG-1556, Volume 9 "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Medical Use Licenses,"

INTRODUCTION

The SMaRT Station receives refuse from three San Francisco Bay Area cities, Sunnyvale, Mountain View, and Palo Alto. The 110,000 square foot facility processes around 1,100 tons of refuse per day. Around 175 trucks make deliveries to the SMaRT Station each day and 40 trucks take garbage that cannot be recycled to the Kirby Canyon landfill. The facility is operated by GreenTeam/Zanker, who employs 70+ sorters on 3 sort lines to separate paper, glass, and plastic. Concrete, wood, and scrap metal are sorted by hand on the tipping floor. The SMaRT Station also prepares materials for market and yard waste for composting. All types of industrial vehicles participate in this process: 18-wheel transfer trucks, rear, front, and side-loading refuse, yard waste and recycling trucks, and roll-off trucks. The public also brings waste to the facility's drop-off center in all types of vehicles. In addition, the SMaRT Station receives treated medical waste from the Stanford University Medical Center for transfer to Kirby Canyon landfill.

Over the years, odd things have passed through the SMaRT Station, including goat heads and fake grenades. To date, the SMaRT Station is aware of only one incident in which radioactive materials have entered the facility. A load of scrap metal sent from the SMaRT Station to SimsMetals, a local metal recycler, was returned after Sims gate monitors detected radioactivity in the load. The source was an aircraft dial that was received at the SMaRT Station from an unidentified source. Other types of radioactive materials may have passed through the SMaRT Station undetected by either the SMaRT Station or Kirby Canyon landfill neither of which has monitored waste for radiation until now. As of this writing, the Kirby Canyon landfill does not monitor incoming loads for radioactivity.

Radiation Monitoring Equipment

The SMaRT Station monitors radioactive materials at the incoming scales using two sets of fixed plastic scintillation detectors manufactured by Ludlum Measurements, Inc. Each pair of detectors is connected to a microprocessor that provides continuous monitoring of background radiation and automatic adjustment of alarm setting to compensate for background fluctuations. The system includes a microprocessor with an analog meter, indicator lights for power, alarms, checking, and overspeed, and control buttons. The system is equipped with a date/time printer, red alarm strobe, cables, and a check source. A portable survey meter will be used to identify the general location of radioactive materials in incoming loads. A hand-held radioisotope analyzer will then be used to identify the isotope in order to assist in making a decision as to handling and ultimate disposition of the material.

Recordkeeping

The SMaRT Station maintains a daily operation log for the radiation monitoring system. The log will record the daily check of the system, daily readings of the background radiation levels, and records of any detection at or above Action Level One. The SMaRT Station will maintain records of each incident on a Vehicle Survey Form. Information regarding an incident will be recorded in the daily log book and on the Vehicle Survey Form. Completed Vehicle Survey Forms will be stored in the SMaRT STATION SAFETY FILES. See Appendix E for Vehicle Survey Instructions and a model of the Vehicle Survey Form. Training records for SMaRT Station staff that carry out this SOP will be stored in the SMaRT STATION SAFETY FILES.

Training

SMaRT Station personnel who carry out the SOP will be provided with a copy of the SOP and training specific to their responsibilities.

SOP Revision

This SOP should be reviewed and revised periodically. At a minimum, revisions should be made when any of the following occurs:

- New policies or regulations governing the monitoring or disposal of radioactive material are implemented by the State or Federal government.
- The SOP is ineffective during an incident.
- The facility operation changes causing interference with the current plan.
- New monitoring equipment is installed.
- Contacts change in the State Radiological Health Branch, City staff and contractor staff at the SMaRT Station, and City Hazardous Materials Coordinator.

STANDARD OPERATING PROCEDURE

Scalehouse operators must be familiar with the operation of the radiation monitoring equipment (See Appendix A), daily source checks and log procedures (Appendix B), calibration (Appendix C), and the following information and procedures.

Detection of Radiation and Response

Radiation levels above background have been detected when the microprocessor in the scalehouse is emitting an audible tone and its red alarm indicator light is blinking (see Figure 1).

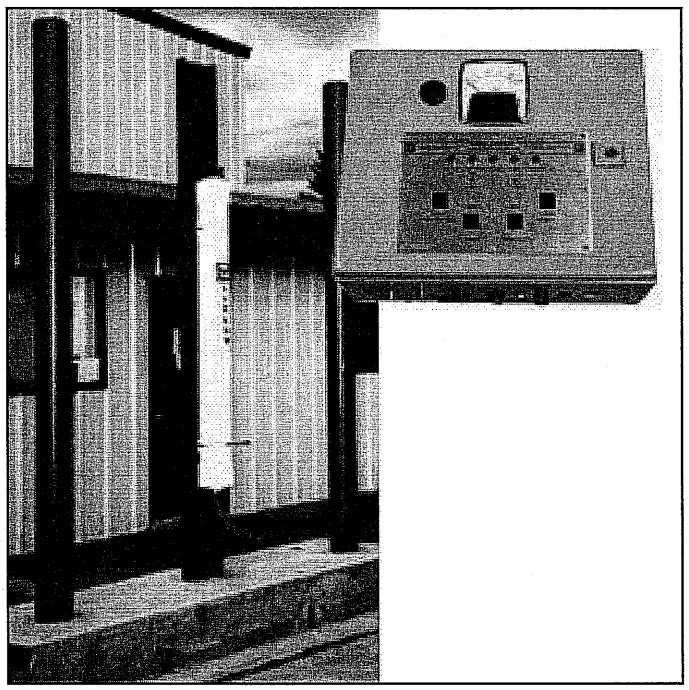


Figure 1: Detector and microprocessor.

Logging Alarms

All excursions over Action Level One should be logged. Use the date/time printer in the scalehouse to log the radiation level (see Figure 2). Describe the incident in the Daily Log.

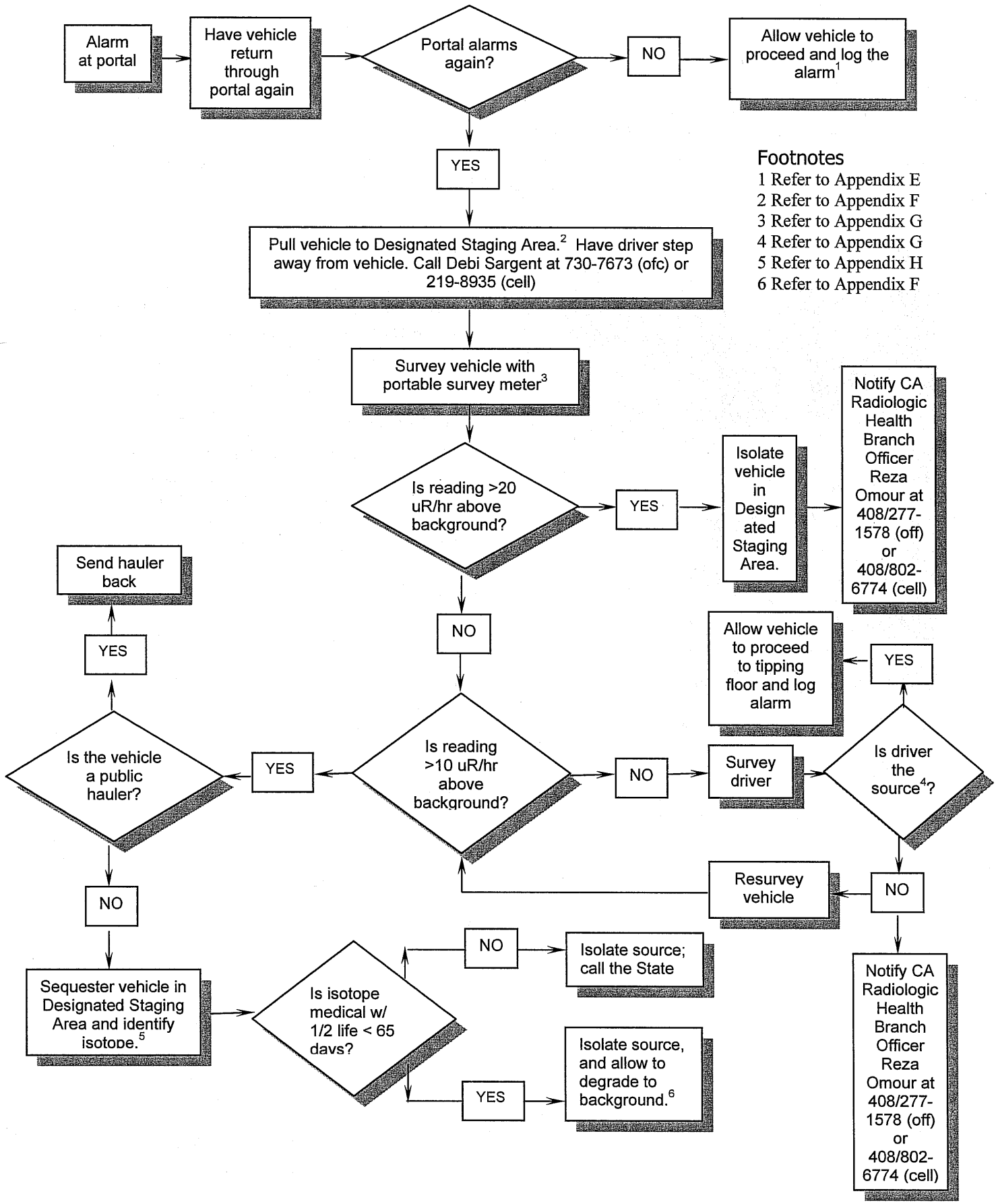
Action Levels

An Action Level is an amount of radiation indicating the need to take specific actions. Because background radiation fluctuates, action levels are set relative to the background. Action Level One is set at 10uR/hr above background, and Action Level Two is set at 20uR/hr above background. [2].

The SMaRT Station uses two actions levels, each requiring different response actions. The system will alarm at Action Level One. When the alarm is triggered, the amount of radiation is at least 10 uR/hr above the background level. Average background levels will be mounted on the system display in the scalehouse. (Background at the SMaRT Station was found to be between 10uR/hr and 12uR/hr based on the procedures and data in Appendix C.)

[2] The Ludlum Model 3500 Series microprocessors continuously monitor background radiation and automatically adjust a user-determined alarm setting (in our case 10uR/hr above background) to compensate for the changes in the background. The system also accounts for the shielding affect as a vehicle passes in front of the detectors. The system first establishes the new background level, compares each individual reading against the non-vehicle background, then against the vehicle background. If any readings exceed the adjusted alarm set-point, they are then further analyzed to determine if there is a potential source in the load.

Scalehouse Alarm Protocol



Footnotes

1 Refer to Appendix E
2 Refer to Appendix F
3 Refer to Appendix G
4 Refer to Appendix G
5 Refer to Appendix H
6 Refer to Appendix F

Action Level One

Action level one occurs when a radiation monitor (with an alarm set point of 10uR/hr above background) alarms indicating the potential presence of RAM in the waste load.

Action Level One Response

Take the following actions for a vehicle that has triggered the alarm:

1. Direct the vehicle to slowly pass by the detectors a second time.
2. If the radiation monitor does not alarm on the second pass, allow the vehicle to proceed and log the alarm.
3. If the radiation monitor alarms on the second pass, take the following actions:
   - move the vehicle to the Designated Staging Area (See Appendix E)
   - have the driver stand 50 feet away from the vehicle
   - Call Debi Sargent at 730-7673 (office) or 408/219-8935 (cellular). If you cannot reach Debi Sargent, call Rich Gurney at 730-7277.
4. Survey the vehicle body and cab as described in Appendix G.
5. If the vehicle survey produces readings greater than 20uR/hr, sequester the vehicle in the Designated Staging Area.
   - Proceed with Action Level Two response
   - Call the State Radiological Health Branch Officer in San Jose, Reza Omour, at 408/277-1578 (office) or 408/802-6774 (cellular).
6. If the vehicle survey produces readings less than 10uR/hr, survey the driver at a distance of 50 feet from the vehicle.
   - If the driver is the source of the radiation, check to see if he/she had a recent treatment with nuclear medicine.
   - If so, allow the truck to proceed.
   - If the driver is not the source of radiation, re-survey the truck. If the truck radiation levels are now at or below background, the truck may proceed as normal.
7. If the vehicle survey produces readings less than 20uR/hr but greater than 10uR/hr, do one of the following:
   - For public haulers, send the vehicle back its point of origin to determine the source of the radiation.
   - For all other vehicles, allow the vehicle to remain in the Designated Staging Area and identify the isotope present following the procedures in Appendix G.

Sequester of a Medical Isotope-Contaminated load

To be sequestered at the SMaRT Station (qualify for disposal), the identified radioisotope must meet the following conditions:

- Produce a detected dose rate less than Action Level Two
- Exist as a medical isotope in the MCA spectrometer library with a half-life less than 65 days (see Appendix J: Radioisotope Libraries and Classification).

[In PA no modeling is necessary to support the disposal of medically contaminated waste at landfills. The vast majority of nuclear medicine and radiotherapy patients are administered radionuclide in the less than 65 day decay category and their excreta is disposed in the sanitary sewer system as permitted by State and Federal law. The small amount of patient-contaminated medical waste will be well under these levels and at landfill facilities should cause no problems or concern.]

Rejection of the Waste load

If the SMaRT Station rejects the load, the following steps are taken:

Survey the entire vehicle to determine radiation field about the truck (see Appendix F for survey forms)

Contact the appropriate CADHS official and notify them of your intentions to reject a load.

[In PA they fax a truck survey form to the State and request that they fax back to the Station, a signed DOT Exemption Form for the vehicle so the vehicle can transport the material to an appropriate facility.

In PA, if the driver leaves the vehicle without a DOT exemption form and before RAM can be evaluated, contact the PA State Police and provide them with any information you may have on the vehicle such as make, model, color, company name, license plate number, time left and the direction in which the vehicle was traveling and, if possible, the intended destination. This is to ensure that the driver does not dispose of the contaminated waste improperly. Notify the appropriate DEP Area Health Physicist listed in Appendix I and alert that individual of the situation.]

Appendix A - RADIATION MONITORING EQUIPMENT

Appendix B - CALIBRATION LOG

Appendix C - DAILY ACTIVITIES

SOURCE CHECKS AND DAILY LOG

Appendix D - DETEMINATION OF UNSHIELDED BACKGROUND RADIATION

Appendix E - LOGGING ALARMS

Appendix F - DESIGNATED STAGING AREA

Appendix G - VEHICLE SURVEY PROCEDURE

Appendix H - RADIOISOTOPE IDENTIFICATION PROCEDURE

Appendix I - VISUAL CUES: RADIOACTIVE ITEMS & SYMBOLS

Appendix J - CONTACTS

Appendix K - RADIOISOTOPE LIBRARIES AND CLASSIFICATION

Appendix E - LOGGING ALARMS

Alarm Log

Name:	Date:
Facility:	Time:

Vehicle Data	Driver Data
Registration:	Name:
Make/Model:	License (# and St)
Year:	Employer:
Color:	Insurance:
No. of doors:	

DESCRIPTION OF OCCURRENCE

Attach readout from gate monitor.

Distinguishing Marks on Vehicle (Commercial name, graffiti, damage, load cover, cap or enclosure for truck bed, etc.)

Appendix F - DESIGNATED STAGING AREA

- Remove driver and all other personnel at least 50 feet from the vehicle.
- Use the GMSM to establish an exclusion boundary based on a detected dose rate of 2mrem/hr. Place a rope and signs at this boundary.
- Physically secure the load or maintain it under surveillance while it remains at the facility.
- Contact the individual responsible for supervising response to alarms at the facility.
- Contact the appropriate Local or State Health Physicist for approvals.
- If isolating medical waste with isotopes of less than or equal to 65 days . . .

Appendix G - VEHICLE SURVEY PROCEDURE

Portable Survey Meter Use and Procedures

Survey the Truck

1. Move driver at least 50 feet away from vehicle during survey.
2. Turn meter ON.
3. Check BATTERY condition. If battery is not charged, replace battery before proceeding.
4. Set scale for x100
5. Turn on Audible speaker.
6. Check probe function:
- Hold probe against CHECK SOURCE on side of meter
- Reading should match that on the calibration label.
7. Establish BACKGROUND radiation level
    - Hold probe away from meter
    - Note background radiation level
    - Record background reading on Survey Form.
8. Scan the vehicle:
    - Hold meter within 5 cm (2 inches) of surface.
    - Move the meter slowly on each side, front, rear, and inside cab of truck.
9. If any readings are more than 10uR/hr over the background level, the vehicle should be considered a possible radiation source.
    - Mark hot spots with chalk.
    - If the counts vary wildly at a certain spot, hover over that spot until the counts stabilize and determine whether the reading is above background.
    - Record readings on Vehicle Survey Form.
10. Compare survey readings to the Action Levels (see Scalehouse Alarm Protocol Flowchart).

Survey the Driver

11. Scan the driver and any passenger:
    - Hold meter within 5 cm (2 inches) of surface.
    - Move the meter slowly by driver's clothing, hands, shoes, face, and hair.
12. If the driver or passenger shows readings more than 10uR/hr over the background level, ask whether either has undergone recent nuclear medical treatment.
    - If either has, allow the driver and vehicle to proceed.
    - If none has, notify the local CA Radiologic Health Branch Officer Reza Omour at 408/277-1578 (office) or 408/802-6774 (cellular).
13. Record readings on Vehicle Survey Form.

Vehicle Survey Form

Surveyor Name:	Date:
Facility:	Time:

Vehicle Diagram (front, rear, side, as applicable)
(Sketch in vehicle diagram and mark the locations measured and the readings.)

Survey Instrument
Meter Used:
Meter Settings:
Background Readings:

DESCRIPTION OF OCCURRENCE

Waste was (Circle one): Rejected Processed Disposed

Vehicle Transporter/Supplier/Handler
Name:
Address:
Phone:
Vehicle ID and License Number:

Appendix I - VISUAL CUES: RADIOACTIVE ITEMS & SYMBOLS

Fiestaware and Vaseline Glass

Uranium compounds have been used for centuries to color glass. A 2,000 year old sample of yellow glass found near Naples, Italy contains uranium oxide. Uranium trioxide (UO_3) is an orange powder and has been used in the manufacture of Fiestaware plates. Other uranium compounds have also been used to make Vaseline glass and glazes. The uranium within these items is radioactive and should be treated with care.
http://education.jlab.org/itselemental/ele092.html

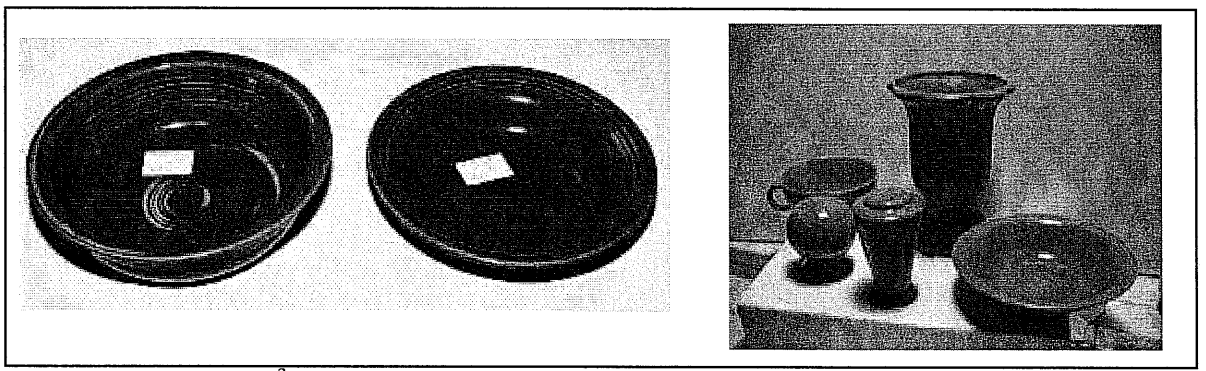


Figure 1: Fiestaware[3]

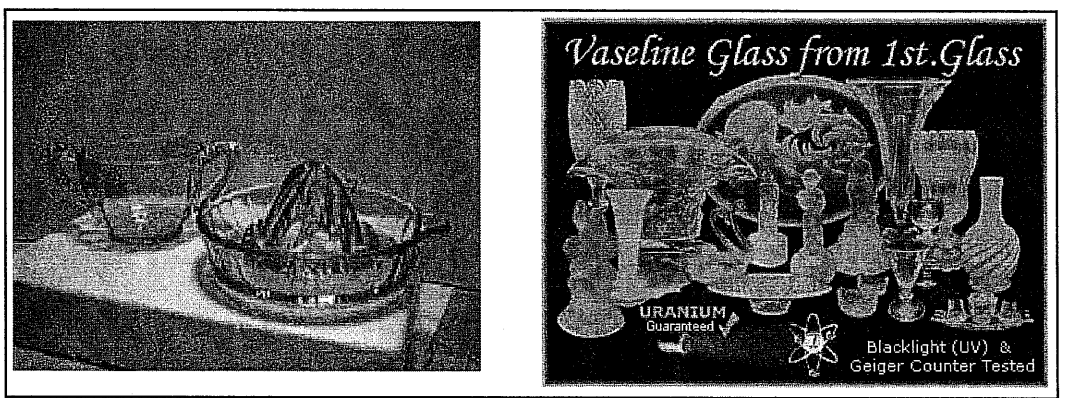


Figure 1: Vaseline Glass[4]

[3] Source: http://www.dangerouslaboratories.org/rglass.html
[4] Source: http://www.dangerouslaboratories.org/rglass.html

Ionization Smoke Alarms

Two types of smoke detectors are ionization and photoelectric detectors. Ionization smoke detectors use an ionization chamber and a source of ionizing radiation to detect smoke. This type of smoke detector is more common because it is inexpensive and better at detecting the smaller amounts of smoke produced by flaming fires. Inside ionization detector is a small amount (perhaps 1/5000th of a gram) of americium-241. The radioactive element americium has a half-life of 432 years, and is a good source of alpha particles and gamma rays or photons.

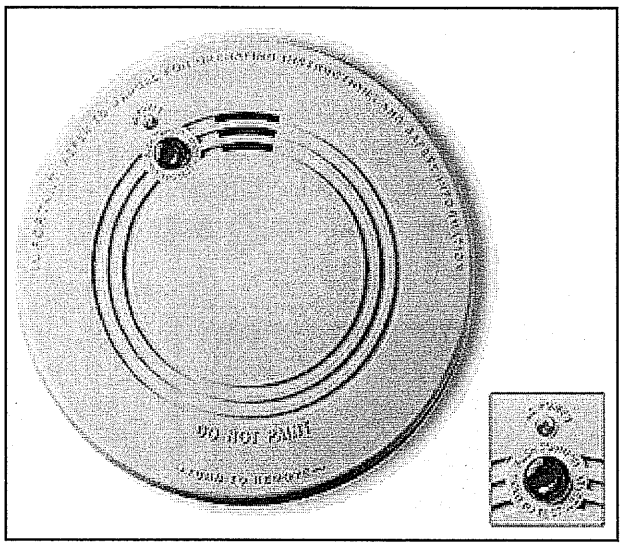


Figure 3: Ionization Smoke Detector[5]

Another way to talk about the amount of americium in the detector is to say that a typical detector contains 0.9 micro curie of americium-241. A curie is a unit of measure for nuclear material. If you are holding a curie of something in your hand, you are
holding an amount of material that undergoes 37,000,000,000 nuclear transformations per second. Generally, that means that 37 billion atoms in the sample are decaying and emitting a particle of nuclear radiation (such as an alpha particle) per second. One gram of the element radium generates approximately 1 curie of activity (Marie Curie, the woman after whom the curie is named, did much of her research using radium).[6]

[5] Source: http://info.load-otea.hrdc-drhc.gc.ca/fire_prevention/bulletins/smoke.shtml
[6] Source: http://home.howstuffworks.com/smoke2.htm

Luminous Dials on Aircraft Gauges and Household Appliances

Many older flight instruments have radium activated luminous markings. Although the external radiation hazard due to normal handling of these instruments is negligible, repair of them presents a potential health problem. The self luminous material, generally found on dial faces and pointers and adjacent to or on switches, tends to flake with age. When an instrument is damaged or dismantled, particles of the radium paint can be ingested, inhaled, or absorbed through a break in the skin. Ingestion can occur following accumulation of radioactive material on the hands, cigarettes, and food. Benefits derived from use of radium activated luminous dials rarely warrant the health hazards involved in reconditioning the dial faces. Though many of the dials have long since lost their light emitting property, the radium is still present.[7]

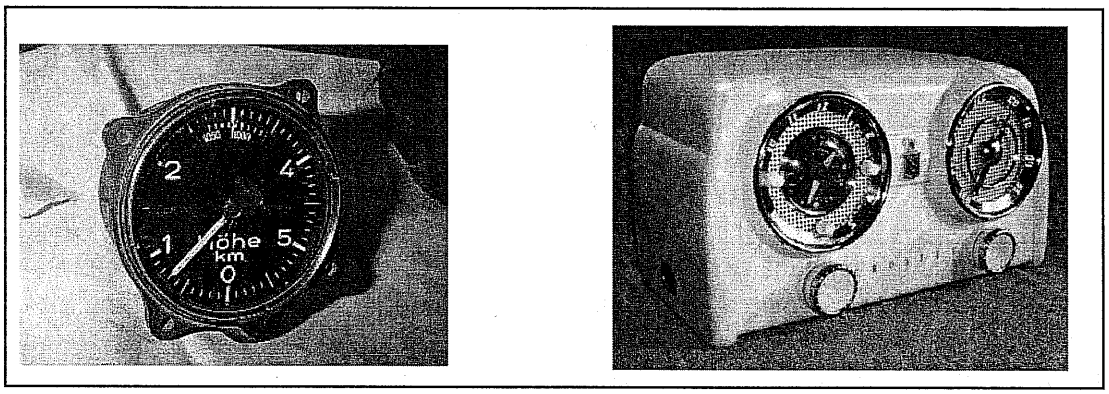
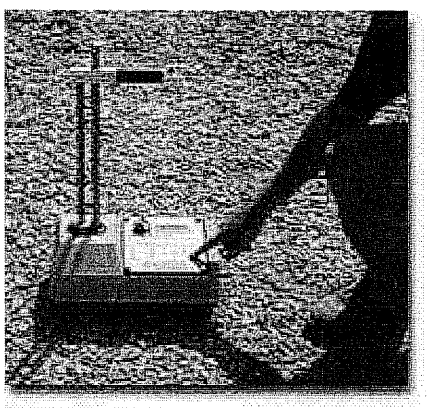


Figure 4: Luminous Dials on Aircraft and Household Equipment[8]

Density Gauges

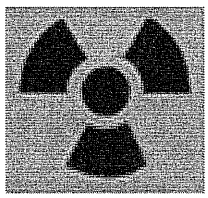


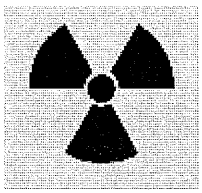
[7] http://www2.faa.gov/avr/aam/3910-3a.htm

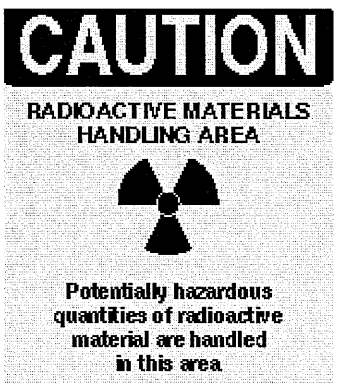
[8] Sources: www.aviation-antiques.com/instruments-4.html and www.radioattic.com/attics/hartman.htm

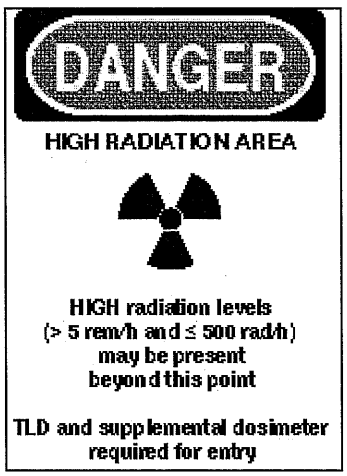
Radiation Signs

This symbol is called a tri-foil and it is the international symbol for radiation. The symbol can be magenta or black, on a yellow background. This sign is posted where radioactive materials are handled, or where radiation-producing equipment is used. This sign is used as a warning to protect people from being exposed to radioactivity. Be alert for this symbol in a load that has triggered the radiation detection alarm.









http://www.epa.gov/radiation/students/symbols.html

The following list is from IEM's website

Fertilizers
Vermiculite
Gas Lantern Mantles
Thickness Gauges
Voltage Gauges and Current Surge Protectors
Spark Plug Gap Irradiators
Fluorescent lamps
Electric Blanket Thermostats
Exit Signs
Military Applications
Cardiac pacemakers
Static eliminators
Tobacco products

Salt Substitutes
Lightning Rods
Mettler Balances
Radioluminescent gauges for aircraft
Clock dials
Pull chains on light bulbs
Switches
Chamber pot lids
Doorknobs
Religious statuary
Telephone dials
Fishing lures
Markers at military bases to assist movement during blackout periods
Optical lenses
High quality lenses (night sights for military applications)
35 mm camera lenses
Welding rods
Rocket nozzles
Lighting filaments
Black ceramic spot plates to visualize light-colored precipitates and porcelain dentures
Cloisonné jewelry (orange coloring)
Kaolin (used in many magazines to produce a high gloss appearance)
Kaopectate (anti-diarrhea medication)
Cat litter

Appendix J - CONTACTS

The City of Sunnyvale person responsible for the implementation of the Action Plan is **Debi Sargent**, the Contract Administrator for the SMaRT Station operator.

- Office 408/730-7673
- Cellular 408/219-8935

The City of Sunnyvale backup person in case Debi Sargent is not available is **Rich Gurney**, the Recycling Supervisor for the City of Sunnyvale.

- Office 408/730-7277
- Pager 408/231-9457

The GreenTeam/Zanker person responsible for the implementation of the Action Plan is **Todd Storti**, the General Manager of GreenTeam/Zanker, operator of the SMaRT Station operations.

- Office 408/752-2795
- Cellular 408/594-2798

The GreenTeam/Zanker Environmental, Health, and Safety Manager is **Maira Simone**.

- Office 408/752-8530
- Cellular 408/590-4760

The City of Sunnyvale Hazardous Materials Coordinator is **Ron Staricha**.

- Office 408/730-7219

The State contact for the radiation monitoring at the SMaRT Station is **Reza Omour**, the San Jose Office Chief of the Department of Health Services Radiologic Health Branch:

- Office 408/277-1578
- Cellular 408/802-6774